

## THERMOPLASTIC MOLDING PROCESS AND APPARATUS

1    ABSTRACT OF THE DISCLOSURE

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3            A thermoplastic molding system includes a  
4 thermoplastic extrusion die for the extrusion of a  
5 thermoplastic slab. The extrusion die has adjustable  
6 die gate members for varying the thickness of the  
7 extruded material in different parts of the extruded  
8 slab. The thermoplastic extrusion die has a trimmer  
9 for cutting the extruded thermoplastic slab from the  
10 thermoplastic extrusion die. A plurality of  
11 thermoplastic molds, which may be either vacuum or  
12 compression molds, are each mounted on a movable  
13 platform, such as a rotating platform, for moving one  
14 mold at a time into a position to receive a  
15 thermoplastic slab being trimmed from the  
16 thermoplastic extrusion die. A molded part is formed  
17 with a variable thickness from a heated slab of  
18 thermoplastic material being fed still heated from the  
19 extrusion die. A plurality of molds are mounted to  
20 the platform to feed one mold into a loading position  
21 while a second mold is in a release position. A  
22 thermoplastic molding process uses the thermoplastic  
23 molding apparatus to mold a part of variable thickness  
24 from a slab of material heated during extrusion.

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